

EXHIBIT 12



Junos[®] OS

User Access and Authentication Feature Guide



Modified: 2018-04-18

file checksum md5

Syntax	<code>file checksum md5 <i>path</i></code>
Release Information	Command introduced before Junos OS Release 7.4.
Description	Calculate the Message Digest 5 (MD5) checksum of a file.
Options	<i>path</i> —(Optional) Path to a filename.
Required Privilege Level	maintenance
Related Documentation	<ul style="list-style-type: none">• file checksum sha1 on page 1891• file checksum sha-256 on page 1892
List of Sample Output	file checksum md5 on page 1890
Output Fields	When you enter this command, you are provided feedback on the status of your request.

Sample Output

file checksum md5

```
user@host> file checksum md5 jbundle-5.3R2.4-export-signed.tgz
MD5 (jbundle-5.3R2.4-export-signed.tgz) = 2a3b69e43f9bd4893729cc16f505a0f5
```

file checksum sha1

Syntax	<code>file checksum sha1 <i>path</i></code>
Release Information	Command introduced in Junos OS Release 9.5.
Description	Calculate the Secure Hash Algorithm (SHA-1) checksum of a file.
Options	<i>path</i> —(Optional) Path to a filename.
Required Privilege Level	maintenance
Related Documentation	<ul style="list-style-type: none">• file checksum md5 on page 1890• file checksum sha-256 on page 1892
List of Sample Output	file checksum sha1 on page 1891
Output Fields	When you enter this command, you are provided feedback on the status of your request.

Sample Output

file checksum sha1

```
user@host> file checksum sha1 /var/db/scripts/opscript.slax
```

```
SHA1 (/var/db/scripts/commitscript.slax) = ba9e47120c7ce55cff29afd73eacd370e162c676
```

file checksum sha-256

Syntax	<code>file checksum sha-256 <i>path</i></code>
Release Information	Command introduced in Junos OS Release 9.5.
Description	Calculate the Secure Hash Algorithm 2 family (SHA-256) checksum of a file.
Options	<i>path</i> —(Optional) Path to a filename.
Required Privilege Level	maintenance view view-configuration
Related Documentation	<ul style="list-style-type: none">• file checksum sha1 on page 1891• file checksum md5 on page 1890
List of Sample Output	file checksum sha-256 on page 1892
Output Fields	When you enter this command, you are provided feedback on the status of your request.

Sample Output

file checksum sha-256

```
user@host> file checksum sha-256 /var/db/scripts/commitscript.slax  
  
SHA256 (/var/db/scripts/commitscript.slax) =  
94c2b061fb55399e15babd2529453815601a602b5c98e5c12ed929c9d343dd71
```